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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,085	03/01/2002	Denis Gallant	12656-US	9110

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EXAMINER

LE, TRAN Q

ART UNIT

PAPER NUMBER

2633

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/085,085

Applicant(s)

GALLANT ET AL.

Examiner

Tran Q. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on March 01, 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities: "of said signal" are repeated twice on p. 5, line 10. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boduch et al. (US Patent No. 6,667,954) in view of Bala et al. (US Pat. No. 6,272,154).

Regarding claims 1 and 7, Boduch discloses a system for verifying path integrity through an electrical switch in a digital communication system (fig. 1) comprising:

an ingress port (103) of the switch to receive a data signal (fig. 1);
a splitter (104) to divide the electrical data signal into parallel paths (105, 106) for delivery to separate switch fabrics (107, 108) (fig. 1 and col. 3, lines 37-44);

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data recovery unit (109, ASIC 110) to receive data signals (111, 112) from the separate switch fabrics (107, 108) and to evaluate signal quality of respective paths (fig. 1, and col. 3, lines 65-67 and col. 4, lines 1-8);

a processor (109, ASIC 110) to select one of the signals of the signals from the separate switch fabrics (107, 108) based on the evaluation (col. 4, lines 1-8).

Boduch differs from claims 1 and 7 in that he does not disclose an optical receiver at the ingress port of the switch to receive and to convert the optical data signal to an electrical data signal, and an optical transmitter at an egress port to convert the one signal to an optical signal and to transmit the optical signal downstream.

However, Bala teaches an optical receiver (e.g. 252a, fig. 2) at the ingress port (e.g. 251a, fig. 2) of the switch (255, fig. 2), and an optical transmitter (e.g. 258a, fig. 2) at the egress port (e.g. 259a, fig. 2) to convert the signal to an optical signal and transmit the optical signal downstream (fig. 2 and col. 6, lines 47-49). Bala further teaches data recovery units (254a-d, fig. 2 and col. 6, lines 34-46) to receive data signals from the separate switch fabrics (250a, 250b, fig. 2, and col. 6, lines 13-33) and to evaluate signal quality of respective paths (col. 6, lines 34-46).

Therefore, it would have been obvious for one ordinary skill in the art at the time the invention was made to incorporate the optical receiver, the optical transmitter, and data recovery units as taught by Bala in the system of Boduch in order to provide an electrical data signal input to the electrical switch, evaluate

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the signal quality of respective paths, and provide an optical output signal to the transmission medium downstream to obtain a simple transparent OEO switch for digital communication system.

Regarding claim 2, the combination of Boduch and Bala teaches data recovery units are clock data recovery devices (fig. 2 of Bala).

Regarding claim 3, the combination of Boduch and Bala teaches the CDR devices evaluate the bit error rate of the signals from the separate switch fabrics (see col. 6, lines 34-46 of Bala).

Regarding claim 4, the combination of Boduch and Bala teaches the CDR devices evaluate clock status of the signals from the separate switch fabrics (see col. 6, lines 34-46 of Bala).

Regarding claim 5, Boduch further teaches the electrical signal is divided into two parallel paths (105, 106, fig. 1) and supplied to two separate switch fabrics (107, 108, fig. 1 and col. 3, lines 37-44).

Regarding claim 6, Boduch further teaches the processor operates in conjunction with a selector to provide the signal having the highest quality to the transmitter (col. 4, lines 1-8).

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ramaswami et al. (US Pub. No. 2004/0037553) is cited to show a method, apparatus and systems for regenerating, monitoring and bridging optical signals through an optical cross-connect switch with I/O cards having an optical-

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electrical-optical converter, a splitter, a selector, and two separate switch fabrics receiving the data signals from the splitter.

Kirby (US Patent No. 6,647,208) is cited to show a hybrid electronic/optical switch system with an optical splitter and a switch control processor for data processing and monitoring.

Halgren (US Pub. No. 2002/0105696) is cited to show a transparent OEO switch in a DWDM network utilizing multirate conversion system.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran Q. Le whose telephone number is (571)272-2046. The examiner can normally be reached on 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


M. R. SEDIGHIAN
PRIMARY EXAMINER

TQL